**T04D03 - Lewis Structures I**

1. Draw the Lewis Dot Structures for each (neutral) element in period 2 of the periodic table using dots as electrons, then add X’s to complete the shell.

2. Draw Lewis structures for the following molecules.

a. sulfur dichloride

b. phosphorus trichloride

c. oxygen (II) fluoride

d. ammonia

e. methane, CH4

f. hypochlorous acid, HOCl

3. There can be single, double, or triple covalent bonds. Draw the Lewis structures of the following and indicate whether they have single, double, or triple bonds.

a. nitrogen gas

b. sulfur dioxide

c. oxygen gas

d. water

e. ethylene, C2H4

f. acetylene, C2H2

4. Draw Lewis structures for each of the following:

a. Tetrafluoroethylene (the molecule from which Teflon is built), F2CCF2

b. Acrylonitrile, H2CCHCN, the molecule from which such materials as Orlon are produced

c. Methyltrichlorosilane, H3CSiCl3 , a compound used in manufacturing “silicone” polymers

d. CHClF2 , one of the many chlorofluorocarbons (CFC’s)

e. Vinyl chloride, H2CCHCl , the molecule from which PVC plastics are made